



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/410,150	09/30/1999	DAVID C. BOIKE	99RSS268	6431

20594 7590 09/28/2004

CHRISTOPHER J. ROURK  
AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.  
P O BOX 688  
DALLAS, TX 75313-0688

EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2126

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/410,150

Applicant(s)

BOIKE, DAVID C.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-38 and 40-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-29 is/are allowed.
- 6) ☒ Claim(s) 30-38 and 40-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of Draftperson's Review. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 30-37 and 40-46 are rejected under 35 U.S.C. 102(b) as being anticipated by "Microsoft Windows NT Version 4.0 Device Driver Kit" by MICROSOFT.

As to claim 30, MICROSOFT teaches a communications driver (NDIS intermediate driver), comprising: a network driver interface (network transmission function); and a driver system interface comprising: an external interface (native-media protocol interface) to communicate with one or more non-NDIS compatible external driver entities (NIC driver); and an internal interface (LAN-miniport interface) to communicate with one or more NDIS compatible internal driver entities (higher layer

Art Unit: 2126

NDIS drivers / protocol driver) (pg. 17, 5<sup>th</sup> paragraph, "To send a packet, NDIS functions call NIC driver upper-edge functions or possibly an intermediate NDIS driver such as a LAN emulation driver..."; pg. 17, 3<sup>rd</sup> paragraph, "To communicate with its remote-node peer, an NDIS protocol driver packages messages from an originating component into network data packets...").

As to claim 31, MICROSOFT teaches the external interface handles the semantics of the external driver entities (via translating the packet to the underlying native-media format) (pg. 17, 5<sup>th</sup> paragraph).

As to claim 32, MICROSOFT teaches the external interface is a portion of an operating system interface (kernel mode support routines) (pg. 17, 8<sup>th</sup> paragraph, "When a driver needs operating system support it calls NDIS functions that, in turn, can call kernel mode support routines.").

As to claim 33, MICROSOFT teaches the internal interface comprises a message controller to control one or more message channels (adapter binding) to pass a plurality of messages (packets) between external driver entities (NIC driver) and the NDIS compatible internal driver entities (NDIS drivers) (via passing packets to the drivers) (pg. 17; pg. 24; pg. 34-35; pg. 37-41).

Art Unit: 2126

As to claim 34, MICROSOFT teaches a method of abstracting a driver system interface, the method comprising the steps of: creating a message channel (adapter binding) between an internal NDIS miniport compatible driver entity (NDIS driver) and an external non-miniport compatible driver entity (intermediate NDIS drivers / NIC driver / transport driver); and routing a software message (packet) between the internal driver entity and the external driver entity through the message channel (pg. 17, 5<sup>th</sup> paragraph, "To send a packet, NDIS functions call NIC driver upper-edge functions or possibly an intermediate NDIS driver such as a LAN emulation driver..."; pg. 17, 3<sup>rd</sup> paragraph, "To communicate with its remote-node peer, an NDIS protocol driver packages messages from an originating component into network data packets..."; pg. 17; pg. 24; pg. 34-35; pg. 37-41).

As to claim 35, MICROSOFT teaches creating a plurality of platform specific and operating specific message channels (adapter bindings) between a plurality of internal NDIS miniport compatible driver entities (NDIS drivers) and a plurality of external non-miniport driver entities (intermediate NDIS drivers / NIC drivers / transport drivers); and routing a plurality of software messages (packets) between the plurality of internal NDIS miniport compatible driver entities and the plurality of external non-miniport compatible driver entities (pg. 17, 5<sup>th</sup> paragraph, "To send a packet, NDIS functions call NIC driver upper-edge functions or possibly an intermediate NDIS driver such as a LAN emulation driver..."; pg. 17, 3<sup>rd</sup> paragraph, "To communicate with its remote-node peer, an NDIS

Art Unit: 2126

protocol driver packages messages from an originating component into network data packets...";pg. 17; pg. 24; pg. 34-35; pg. 37-41).

As to claim 36, MICROSOFT teaches creating a platform specific and operating specific message channel (adapter bindings) between a first internal driver entity and a second internal driver entity (NDIS drivers / intermediate drivers / NIC drivers / transport drivers); and routing a message between the first driver entity and the second driver entity through the platform specific and operating system specific message channel (pg. 17, 5<sup>th</sup> paragraph, "To send a packet, NDIS functions call NIC driver upper-edge functions or possibly an intermediate NDIS driver such as a LAN emulation driver..."; pg. 17, 3<sup>rd</sup> paragraph, "To communicate with its remote-node peer, an NDIS protocol driver packages messages from an originating component into network data packets...";pg. 17; pg. 24; pg. 34-35; pg. 37-41).

As to claim 37, MICROSOFT teaches the routing step is performed by an installable component corresponding to the message channel (handles to adapter bindings of lower layered drivers) (pg. 34, 11. ...The intermediate driver must retain this handle and....when the intermediate driver has completed its binding-related activities and is ready to accept transmit requests..").

As to claim 40 refer to claim 34 for rejection.

As to claim 41, MICROSOFT teaches a platform interface (via NDIS ProtocolBindAdapter function) coupled to the message controller (routing functionality of NDIS intermediate driver that sends a message / request to another entity) to provide platform specific information to the message controller (pg. 34, "SystemSpecific1 points to a registry path if the intermediate driver stores adapter-specific information in the registry.").

As to claim 42, MICROSOFT teaches the message controller communicates with an OS interface through functions (kernel mode support routines) (pg. 17, 8<sup>th</sup> paragraph, "When a driver needs operating system support it calls NDIS functions that, in turn, can call kernel mode support routines.").

As to claim 43, MICROSOFT teaches a plurality of message channels (adapter bindings) to communicate between the plurality of internal driver entities and the plurality of external driver entities (pg. 17, 5<sup>th</sup> paragraph, "To send a packet, NDIS functions call NIC driver upper-edge functions or possibly an intermediate NDIS driver such as a LAN emulation driver..."; pg. 17, 3<sup>rd</sup> paragraph, "To communicate with its remote-node peer, an NDIS protocol driver packages messages from an originating component into network data packets..."; pg. 17; pg. 24; pg. 34-35; pg. 37-41).

As to claim 44, SOMEBODY teaches the message controller comprising a plurality of installable components corresponding to the plurality of message channels

(handles to adapter bindings of lower layered drivers) (pg. 34, 11. ...The intermediate driver must retain this handle and....when the intermediate driver has completed its binding-related activities and is ready to accept transmit requests..").

As to claim 45, MICROSOFT teaches the plurality of installable components comprise function pointers (Systemspecific1 / Systemspecific2) corresponding to functions (buffer allocation) in the OS interface (pg. 34; pg. 17).

As to claim 46, MICROSOFT teaches that the intermediate driver can be layered above or below another intermediate driver and over one or more NDIS NIC drivers (pg. 24). MICROSOFT also teaches that the drivers communicate software messages (packets / receive queries / set requests) with one another through a channel (adapter binding) (pg. 34-35; pg. 37-41). Therefore, MICROSOFT teaches the message controller (routing functionality of the initial intermediate NDIS driver) routes the plurality of messages (packets / receive queries / set requests) to a plurality of internal entities (below layered intermediate NDIS drivers).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



2. Claims 38, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Microsoft Windows NT, Version 4.0 Device Driver Kit" by MICROSOFT in view of "NDIS Concepts" by 3TECH.

As to claim 38, MICROSOFT substantially discloses the invention above. However, MICROSOFT does not mention that the message header of the message contains routing information.

3TECH teaches each message (packet) comprises a message header portion (packet header information / immediate data) (pg. 17, "An additional feature available in transmit...A protocol might use this for building packet header information...") containing routing information (source address / destination address) for the message controller and a message information portion (buffer / buffer chain in the descriptor structure of the packet) containing data related to an action for a target entity to perform (pg. 16, "These packets include all the information...including data link fields such as source and destination address."; pg. 17, "NDIS defines a structure, the transmit data buffer descriptor...and calls the MAC with the TransmitChain primitive."). Therefore, it would be obvious to combine the teachings of MICROSOFT with 3TECH in order to facilitate avoid unnecessary, time-consuming copying of data between buffers (pg. 16, last paragraph).

As to claim 47, refer to claim 38 for rejection.

As to claim 48, 3TECH teaches the message header portion (packet header) comprises an event variable to indicate a unique event for a corresponding message channel (acknowledge / buffer descriptor indicating a buffer or a chain of buffers) (pg. 17, "A protocol might use this for building packet header information, or for entire small protocol-generated packets, such as acknowledgements.") and a message channel identifier (destination address) variable to indicate the corresponding message channel (pg. 16, "These packets include all the information...including data link fields such as source and destination address."; pg. 17, "NDIS defines a structure, the transmit data buffer descriptor...and calls the MAC with the TransmitChain primitive.").

#### ***Allowable Subject Matter***

3. Claims 11-29 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The cited claims detail a system interface abstraction layer comprising the cited operating system interface and the cited message controller within the miniport driver of a communications driver. The prior art of record at best teaches the communication, translation, and execution of data packets with functions in a driver such that incompatible drivers can communicate through a standardized system. In particular the cited prior art uses a NDIS architecture for standardizing communication of data and the invocation of functions between incompatible drivers, i.e. native protocol drivers. The system does not detail the cited system interface abstraction layer within a miniport

Art Unit: 2126

driver that is within a communications driver as detailed in the claims. Therefore, the cited claims is allowable over the cited prior art of record.

### ***Response to Arguments***

5. Applicant's arguments filed 6/14/04 have been fully considered but they are not persuasive. Applicant details no arguments in regards to pending claims 30-38 and 40-48. At best, Applicant states that the pending claims detail more distinctions between the prior art and the unamended claims without any reasoning of what that distinction is. Therefore, the examiner rejects the claims as indicated above.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. In late October, the examiner can be reached at (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. In late October, the examiner's supervisor can be reached at (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 20, 2004

  
**LEWIS A. BULLOCK, JR.**  
**PRIMARY EXAMINER**